

ABSTRACT OF THE INVENTION

A method for separating suspended clay fines from water in a mining clay slurry is disclosed. The method comprises injecting simultaneously the clay slurry, a polymeric flocculating agent, and optionally, dilution water directly into a clay settling area (CSA), flocculating the clay fines in the CSA, and sedimenting the flocculated clay to form a thickened clay and a supernatant fluid. The method can further comprise recycling the supernatant fluid as mining process water or dilution water. The method can further comprise transferring the thickened clay from the CSA into one or more additional CSAs. The polymeric flocculating agent can be added either as an aqueous solution or as dry chemical.